Land policy REVIEW

Contents FOR APRIL 1941 *Vol. IV No. 4*

Page

Streamlining a Hemisphere . . . . *Joseph L. Apodaca* 3

Human Resources in Farming . . . *Walter W. Wilcox* 9

Conservation, a Continuing Emergency *Claude R. Wickard* 14

Mr. Higgenbottom, Migrant, Tells His Story 18

Better Farm Housing . . . . . *Frank J. Hallauer* 27

Who Plants a Tree . . . . . *Paul H. Roberts* 31

Small Farms in the Shrinking West . *A. M. Richardson* 36

Books . . . . . *Alva H. Benton, Buis T. Inman* 39

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

Editorial Notes

CONTRIBUTORS TO THIS ISSUE: Joseph L. Apodaca is a senior economist in the new Latin American division of the Office of Foreign Agricultural Relations. He recently returned from an extensive trip in South America.

Walter W. Wilcox is associate professor of economics and rural sociology in Iowa State College at Ames.

Two Forest Service men have articles in this number. Paul H. Roberts directs the Prairie States Forestry Project, with headquarters in Lincoln, Nebr. Frank J. Hallauer is principal engineer in the division of forest economics.

A. M. Richardson is county agent of Pierce County, Washington.

Alva H. Benton, senior social scientist, is in the BAE division of program study and discussion. Buis T. Inman is an agricultural economist in the division of land economics, BAE.

FROM A SPEECH BY SECRETARY WICKARD: ". . . The Department welcomes specific criticisms. When criticisms are found to be justified, we will move to improve conditions. We have a duty to all the farmers and all the taxpayers to do the best job we can. We are hired men and the farmers and the people of the country generally are our employers. We must operate the farm programs for the service of all farmers—cotton growers, wheat gowers, tobacco growers, dairymen, and so on. We do not and we cannot operate them for special service to any group of producers, or members of any single organization. . . .

"Differences we will have, of course, and differences we should have. Discussion is democracy. But let us not let the differences grow into dissension. So long as the aim of an individual or group is service to agriculture, all true friends of the farmer should be able to work on an amicable basis with that individual or group, as the case may be."

LATER ISSUES will include articles by the Rev. Martin E. Schirber, on the study club; Margaret M. Fellows, on the training of boys at the Bowdoin Farm School; C. O. Brannen, on credit policies in relation to economic systems of farming, and John A. Bird, on a new kind of flood control.

DEPOSITED BY THE
UNITED STATES OF AMERICA

LAND · POLICY · REVIEW

Land Policy Review is published monthly by the Bureau of Agricultural Economics, U. S. Department of Agriculture, with approval of the Bureau of the Budget. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 5 cents a single copy, 50 cents a year

Streamlining the WESTERN HEMISPHERE

By JOSEPH L. APODACA. *Difficulties besetting the Western Hemisphere in presenting a solid economic front stem from the character of agricultural production in the Americas. Their removal would call for measures that affect production and the uses of land. The land readjustments implied in reshaping the hemisphere to meet modern needs would affect a number of countries of the New World, including the United States.*

FLYING DOWN from Rio over Montevideo to Buenos Aires is a fascinating experience that requires but 8 hours. These are short hours packed with surprises for one interested in the land and the welfare of those who till the soil. To stop occasionally, examine the situation at eye level, and speak to the natives in their language is to enrich immeasurably the experience.

Rio, you see, lies on the edge of a tranquil tropical harbor bedecked with towering mountain peaks and presents a panorama of breath-taking beauty. For several hours after one takes off at Rio, the plane flies over mountainous country. When one rises above the challenging peaks it is difficult to detect just what the world below is doing. But here and there a winding mountain road guides one's eyes to a deep valley below, where clusters of houses sketch the outline of a village with land cleared systematically for miles around. Some vegetation and livestock are discernible.

As the State of Rio Grande do Sul in the southernmost part of Brazil comes into view, the mountains give way to rolling hills and plains, the center of Brazil's livestock industry. The thrills are over now as one sails southward on a more or less even keel, just a few hundred feet above the ground. Plain, matter-of-fact

country passes in review underneath. Nature does not talk back now, except in a Kansas-like monotony of rolling plains, broken here and there by a village or small city and a winding river.

Several minutes later one slips over Uruguay, hardly knowing it, except that the atmosphere feels somewhat colder. Here is the heart of a rich agricultural region, famed for its wheat, corn, flaxseed, and livestock. Fields below are rich with vegetation and give every evidence of careful, scientific cultivation. Cities are larger and more numerous until, to the left, appears Montevideo.

Shortly after one has passed this Uruguayan metropolis, Buenos Aires comes into sight. The well-combed, flat landscape and fertile fields that spread out before one's eyes for miles around before one arrives at the great city convince one that here indeed is a country rich in natural resources, where most of the Temperate Zone crops common to the United States grow abundantly. Topsoil is rich and needs no fertilizer; much of it has not yet felt the stab of the plow.

Buenos Aires is more than a big city. It is the busiest port of South America. It has more than 3,000,000 inhabitants and numerous skyscrapers, and reminds one of our own American cities—New York, Chicago, St. Louis, Los Angeles. Here is assembled the choice produce of Argentina's farms and ranches—wheat, corn, linseed, fruits, and livestock products—for shipment to the world's markets, principally to England and continental Europe.

Leaving the humming center of Buenos Aires, the plane soars once more over the vast plains of Argentina to Cordova, and finally to Mendoza, where some of the finest South American wines originate. The stop-over at Mendoza is a prelude to a fascinating flight over the Andes. After a few minutes above the clouds, evading the challenging peaks of the Andes at an altitude of 15,000 to 18,000 feet, the plane glides down to Santiago, Chile.

These countries are the most thickly settled in South America. The population is mostly of European extraction. This lower portion of the South American continent, consisting of southern Brazil and Uruguay, Argentina, and Chile, comprises 2,400,000 square miles. The cultivated segments of it are estimated to total 222,000 square miles, or something like 60 percent of all the cultivated area of South America.

Source of Surpluses

It is an area that contributes substantial portions of the agricultural products regarded today as Western Hemisphere surplus crops.

More than 99 percent of the hemisphere's surpluses of flaxseed, corn, hides and skins, mutton and lamb, beef, and beef products originates there. Besides, it is the source of approximately 18 percent of the hemisphere's surplus of cotton, 36 percent of the wheat, 16 percent of the pork products, 45 percent of the oranges, 21 percent of the pears, and 3 percent of the apples. The remaining portions of the hemisphere surpluses of these products come from the area embraced by Canada and the United States at the opposite end of the hemisphere.

When the agricultural exports of Latin America are combined with

those of the United States and Canada, a picture is obtained of the net export position of the Western Hemisphere as a whole.

With respect to the commodities specified, it is found that in the 4 years immediately preceding the outbreak of the present war, 1935 to 1938, the Western Hemisphere exported to outside areas an annual average of 260,000,000 bushels of wheat, 7,000,000 bales of cotton, 252,000,000 bushels of corn, 45,000,000 bushels of linseed, 211,000,000 pounds of wool, 357,000,000 pounds of hides and skins, 403,000,000 pounds of hog products, 122,000,000 pounds of mutton and lamb, 1,240,000,000 pounds of beef and beef products, 7,000,000 boxes of oranges, 16,000,000 boxes of apples, and almost 3,000,000 bushels of pears.

Today these surpluses are begging for extra-hemisphere outlets, inasmuch as the European markets, which formerly absorbed the great bulk of them, are now practically closed.

The products mentioned, coming from the Temperate Zones, both north and south, constitute the gravest problem in the present and post-war agricultural readjustments of the Americas. The fact that they create economic and political friction between two widely separated areas of the hemisphere constitutes a possible stumbling block to hemispheric solidarity and defense.

The effect of the war on the hemisphere's export situation may be illustrated by reference to three commodities. Canada, the United States, and Argentina are expected to have an estimated 1,000,000,000 bushels of wheat available for export in 1941, but the most liberal estimates indicate that importing countries will probably not take more than 300,000,000 to 350,000,000 bushels.

Effect of War

When the current crop year for Western Hemisphere cotton began on August 1, 1940, the hemisphere already had a carry-over of cotton from the previous year of 11,000,000 to 12,000,000 bales, which meant 4,000,000 to 5,000,000 bales more than the quantity necessary to meet the usual pre-war hemisphere exports. As regards corn, the combined output of the United States and Argentina in 1940–41 is estimated at something over 2,800,000,000 bushels. Approximately 900,000,000 bushels will be available for export, but the prospects are that not more than 100,000,000 to 125,000,000 bushels of this will be exported by the 2 countries. So serious has the corn surplus problem become in Argentina that in recent months corn has been used as fuel in that country.

Certainly, these are hemispheric problems that call for concerted action by the various exporting nations; action by individual countries will not correct the basic difficulties.

For example, Argentina has sought to aid her grain producers by establishing Government-guaranteed minimum prices for wheat, corn, and flaxseed. Before the outbreak of war in Europe these efforts had a measure of success, because the Government generally was able to dispose sooner or later of the supplies bought from producers. But as surpluses continue to accumulate because of progressively declining foreign outlets, the disposal of these supplies becomes increasingly difficult. Thus, of late, there has been

a growing realization that some curtailment of production must be made, and a new law in Argentina now gives the Government the authority to request a reduction in acreage up to 10 percent for such crops as wheat, corn, and flaxseed.

Coffee affords another interesting example in this connection. For many years Brazil wrestled with the problem of overproduction of coffee. Between 1935 and 1938, although the hemisphere's net exports of coffee averaged 1,167,000,000 pounds a year, Brazil was destroying millions of bags of coffee annually. Meanwhile, however, other coffee-growing nations of the Western Hemisphere were expanding coffee production. For a year following the outbreak of war in Europe the coffee-exporting nations were so critically burdened with surpluses that they finally decided to undertake collective action.

An inter-American coffee agreement was signed November 28, 1940, by 14 coffee-producing countries and the United States. The outstanding feature is the allocation of basic quotas not only for the United States market but for markets outside the United States as well. It is significant that since the coffee agreement was signed the average monthly price of coffee has risen substantially. The quoted price rose from 9¼ cents a pound in November 1940 to more than 12 cents a pound in February 1941.

These experiences, plus the critical situation that accumulating hemisphere surpluses have brought about, stress the need for commodity collaboration on an international scale, in order that the measures adopted by one nation may not be negatived by the actions of another.

The general formula provided by the coffee agreement might be used in extending inter-American cooperation to other commodities. Because of the need for improved standards of living in the New World, however, efforts must be made to increase consumption in the hemisphere through both commercial and relief channels and to provide greater storage facilities for these crops in order to regulate their flow to market and make them available during years of short crops.

But a realistic program will not stop there. In view of diminishing world markets for these crops and the dark prospects for years to come, an important feature of commodity collaboration should be the restriction of production in the exporting countries.

Land Adjustments

In attaining such a restriction, some land readjustments would become necessary. The specific nature of these cannot be foretold at this time. But it seems clear that the readjustments would include the temperate regions of the hemisphere, north and south. In the northern portion this means the United States and, to a minor extent, Canada; in the southern portion, parts of Brazil, Uruguay, Argentina, and, to a minor extent, Chile.

We must not forget the vast central portion of the Western Hemisphere, which includes the northern half of South America, the Caribbean countries, and Mexico. This region faces serious surplus situations with respect to coffee, sugar, and tobacco. Inter-American commodity collaboration for these prod-

ucts would also call sooner or later for crop restriction and its accompanying land readjustments in producing areas. But this wide central portion of the hemisphere is of special interest for two other reasons. One is that it is the heart of the American tropics, where great undeveloped resources lie untouched. The other is that the trend of production characteristic of the past decade in the countries of this vast region has a direct relation to the success of efforts undertaken to relieve the surplus situations of staples like wheat, cotton, and other products of the Temperate Zones.

Economic Nationalism

During the past 10 years the countries in this tropical and semi-tropical region persistently have sought, with the aid of excessively high tariffs and other forms of control, to diversify their agriculture and develop production of Temperate Zone foodstuffs and raw materials. This was because, being highly dependent upon income derived from a limited number of tropical and semi-tropical products, they faced the cumulative impact of a series of forces that restricted their markets.

These forces began with the growth of economic nationalism in the decade following the World War, and were intensified by the crash of 1929 and its consequent impact upon these countries' currencies, followed by the drastic decline in general world trade by 1932. The early 1930's were marked by an extension of restrictive trade policies on the part of all major importing countries, including the United States.

Partly in retaliation, partly in an endeavor to maintain the balance of trade, and partly to increase their self-sufficiency, these nations raised their tariffs to unprecedented levels in the hope of stimulating domestic production of foodstuffs formerly imported. The initial efforts were prompted largely by desperation. Once the programs were under way, however, it has not been easy to give them up despite the recognized fact that such high duties make internal prices high and increase the cost of living.

This tendency is of significance in the matter of crop restriction in Temperate Zone countries. It would not do at all for countries exporting wheat, cotton, livestock products, and fruits to adjust their production to conform with present and prospective market developments if, simultaneously, the countries in the central portion of the hemisphere continued to expand their output of these goods without limit. Alternative programs must be developed in the American tropics if tropical countries are to be encouraged to divert production away from Temperate Zone products.

New Products

Fortunately, it is felt that alternative programs can be developed in tropical America if the proper scientific and financial assistance is made available.

It happens that the American tropics constitute the original habitat of a number of necessary raw materials. Among these are natural rubber; cinchona bark, from which quinine is made; mandioca, used as a food, starch, and as a specialty

flour; the ceiba tree, the source of kapok, a product used in making life preservers and other industrial goods; cubé root, long used as a source of insecticide; and cacao.

Moreover, tropical America is well suited for the production of fibers, like hemp, henequen, sisal, and abacá; industrial and vegetable oils; and special types of nuts, like cashews and coconuts. Some of these products, as indicated, are of American origin, but they were taken to other lands which have become their major (and in some cases their sole) source of supply. Average annual imports into the United States of these products amounted to $430,000,000 in the period 1937 to 1939, but less than 6 percent of this amount represented purchases from tropical America.

Here lie some possibilities of increasing our purchases of noncompetitive products from Latin America from the present level of about $200,000,000 a year to an estimated total of $630,000,000. Efforts to accomplish this are already under way, through the cooperative action of Latin American governments, the United States Department of Agriculture, and private interests in this country.

It is to be expected that the work will ultimately result in substantial readjustments in the use of the productive resources of tropical America. It should, therefore, tend to discourage production in the Tropics of those Temperate Zone products of which troublesome surpluses exist. As a consequence, moreover, it should make the central part of the hemisphere not a potential competitor but a customer for the Temperate Zone agricultural products of the northern and southern portions of the hemisphere.

The total effect of the measures mentioned is calculated to be threefold: A harmonizing of the various producing regions in the hemisphere so as to remove substantially the causes of economic friction that now divide the Americas, the attainment of a greater degree of hemispheric self-sufficiency, and the establishment of a sounder basis of inter-American trade.

The hemisphere would be fashioned to attain a higher level of comfort for its peoples and geared to present a solid front to threatening world forces.

In a sense we would have a streamlined hemisphere, revamped to meet the needs of modern times.

Glory

The glory of the farmer is that, in the division of labors, it is his part to create. All trade rests at least on his primitive activity. He stands close to nature; he obtains from the earth the bread and the meat. The food which was not, he causes to be. The first farmer was the first man and all historic nobility rests on possession and use of land.

—Ralph Waldo Emerson

A More Economic Use of HUMAN RESOURCES

By WALTER W. WILCOX. *A forward-looking farm policy must take into account better and wider vocational training of farm youth—for their own sakes and for the sake of agriculture.*

NATIONAL agricultural policies are at the crossroads. The experience gained in the operation of the far-flung New Deal farm program in the last few years indicates that important changes in direction are needed. Recent national and world developments accentuate this need. Organized agricultural policy makers in the Department of Agriculture sense this need. They are taking steps to reappraise recent policies and lines of action in the light of present knowledge and events.

The thesis of this article is that agricultural policy makers now have a unique opportunity to branch out in a new but related field and develop policies for vocational training and guidance of farm-reared people into nonfarm occupations; this will make three important contributions to farm and national welfare:

Such a program would assist in mobilizing and training our manpower for the current defense undertaking;

It would facilitate the movement of surplus farm people into nonfarm occupations, thereby reducing the number of farm people to be supported by a farm income of any given size;

If properly organized and undertaken on a large scale, it would greatly increase the flexibility and mobility of farm-reared youth, and to that extent facilitate readjustments when we have accomplished our defense aims and return to more normal business pursuits.

Throughout the past decade, leaders concerned with the formation of agricultural policy have recognized the problem of surplus labor on the farms. Their failure to include a positive program for the development of these excess human resources for nonfarm occupations may be excused on the grounds of preoccupation with the farm income problems and the general unemployment situation.

We are now moving into a period when these situations will be greatly changed. Both the farm income problem (except in the Cotton Belt of the South, the wheat-growing areas of the Great Plains, and a few other, minor areas) and the general unemployment situation will be well taken care of throughout the duration of the war-boom period ahead. Hence this appears to be a strategic time to formulate and put into operation plans and policies which will help make use of the excess

300130—41——2

human resources in agriculture.

Plans and policies are needed that will contribute toward national defense in the months immediately ahead. But such plans and policies should be sufficiently broad, flexible enough, and so integrated with other plans and policies that they will make an important contribution to agricultural and national welfare in the post war-boom period, too.

Farm Employment

A recent WPA study, *Trends in Employment in Agriculture, 1909–36,* by Eldon E. Shaw and John A. Hopkins, of technological developments and employment opportunities indicates that the number of workers employed in agriculture in 1938 was only 94 percent of the number employed in 1924–29. Most of this reduction was in hired farm workers. Only about one-fourth was represented by a reduction in family workers. Looking forward, a BAE report, *Technology on the Farm,* estimates that 350,000 to 500,000 agricultural workers will be displaced by technological changes during the next decade. Most of this displacement will result from increased use of tractor power and improvements in harvesting machinery.

This displacement of agricultural workers by machinery further intensifies a great problem that has existed for many years. Farm families produced more children than could find employment in agriculture even when work opportunities were expanding rather than contracting. About twice as many boys currently reach the age of 21 as have an opportunity through death and retirement of present farm operators to become operators of existing farms. And the number of farm units in commercial agriculture is declining rather than expanding.

Education for Farming

Organized agriculture has asked for and received continually increasing public support for technical training in agriculture. The objective of this training was to attract and hold more of the boys with high-school and college education in farming, and to equip future farmers with technical knowledge and skills which would help them increase their individual farming efficiency and incomes.

Almost any group of farm people, when discussing their problems, list keeping their children on the farm as a major problem. This noneconomic desire to keep the boys on the farm is understandable. The surprising element is the absence of any well-considered attempt to develop an integrated farm program which would achieve these ends to the extent that they are desirable and at the same time train and guide the surplus farm youth into nonfarm occupations as a fundamental attack on the farm income problem.

Few of the farm people who express a desire to keep their children on the farm think through what it would mean if all children born on farms remained in farming. What they inarticulately are groping for in most instances is the development of forces which would encourage the most promising farm operators to remain in their home communities while the less promising ones entered nonfarm occupations. What they have almost universally overlooked is the fact that a well-

rounded vocational training and guidance program would assist them in achieving their desires.

Financial opportunities in agriculture are limited by the large number of persons attempting to make a living at this occupation. This fact alone discourages many of the most energetic and ambitious young people from undertaking farming as their vocation. But what is probably fully as important, the up-and-coming youngsters find that there are many untrained and only moderately capable individuals who would like to get out of farming. Because of lack of training and vocational guidance these less-qualified people are unable to get other jobs. Many able young people who might like to farm if they had congenial neighbors and could live in a community with relatively high nonmonetary as well as monetary living standards turn from farming to other occupations.

Education for Nonfarming

Farmers' fears of too many young people rushing off to the city no doubt have inhibited them from giving vocational training for nonfarm occupations the attention it deserves. The excessive demand for farms to rent and the inability of rural youth to get jobs in recent years have done a great deal to change current attitudes. But their fears in the first place were largely unfounded.

A greatly expanded vocational training program giving farm youth an opportunity to select from among a number of vocational training courses, together with a functioning system of vocational guidance, should result in the various individuals having more nearly equal opportunities to choose the vocation they like best.

Under such a system, many individuals who now remain in farming not because they like it and take pride in their husbandry, but because they find it impossible to do otherwise, would quickly enter nonfarm occupations. This in turn would make farming more attractive to others. Agriculture should have nothing to fear from such a program. The results would be more economic utilization of our human resources through getting a better "fit" of men to jobs. It should also result in a more desirable rural culture through the operation of a more intelligent selective system.

The income effect of reducing the human resources in agriculture has seldom been given sufficient attention. Our best efforts in recent years through the appropriation of more than $500,000,000 from the Treasury and the use of extensive production control machinery only increased per capita farm income by 7 to 15 percent. (See *Agricultural Adjustment 1937–38*, a summary of the benefits from the various commodity programs. Increases in recent years have been about equal to benefit payments, or 10 percent of the income from the sale of farm products.)

It is conservatively estimated that we could easily man our agricultural industry with 20 percent fewer men. If the number of families in agriculture were proportionally reduced, the same total income would result in per capita incomes 25 percent higher. Even a modest 5 to 10 percent reduction of our human resources in agriculture would increase

per capita incomes as much as our recent production adjustment, ever-normal granary, and related programs.

2 to 3 Boys to Every Farm

The agricultural planning committee in Warren County, Iowa, in the fall of 1939 undertook a study of the age distribution of its farm population and the rate of retirement and death of the present farm operators. From a random 25 percent sample of the farm households, it estimated that 2 or 3 farm boys would reach the age of 20 each year for every farm becoming available through retirement or death of the former operators. As might be expected, most of the children who had left home were in nonfarm occupations, and the significant fact was that few had vocational training for the jobs they were filling.

During each of the past 5 years between 5 and 10 percent of the operating farmers in Warren County quit farming and took up nonfarm occupations. Though the committee did not investigate what occupations these families went into, it seems probable that vocational training and guidance would have been helpful to them.

Another interesting fact: There were between 250 and 300 farm boys looking for jobs in Warren County in the winter of 1939–40. Only 40 to 50 farms in Warren County become available each year as a result of death or retirement of the operator. It would take 6 years for the present surplus of young men to get farms to operate without giving any consideration to the additional 100 farm boys coming of age each year and looking for full-time jobs.

Such figures as these give reality and concreteness to this big problem that farm families, and farm youth in particular, face. The Warren County farmers who made this study are asking themselves, "Is vocational training in agriculture enough for our boys?" They are not likely to decide that more and smaller farms would be an economic solution to this problem in Warren County. The answer appears to be: Train the extra young people to be useful in other occupations and assist them in getting jobs.

A broad, effectively organized system of vocational training and guidance has significance in other directions, besides facilitating the movement of surplus farm people into nonfarm occupations. Farms and farmsteads are far from being completely modernized. Only a small percentage of the farm homes has electricity, running water, and the other modern conveniences. Many farm houses do not even meet minimum accepted standards as to space for the family, light, and warmth.

Low farm incomes, absentee ownership, and several other factors have contributed to the present inadequate rural housing conditions and the absence of the labor-saving devices such as running water and electricity. An important contributing factor and one which would be influenced by the program proposed here is the high cost of skilled workmen to do the carpentry, plumbing, and electrical work.

If young farm people who don't like farming are trained in these and other skills, they will be able to do a considerable amount of such work on their parents' farms. It might be a good idea to set up a

rural housing and modernization program utilizing the services of these youths if our present defense efforts should be followed by a period of unemployment as our national economy readjusts itself again to peacetime pursuits.

A second indirect effect of such a program would be to check monopolistic tendencies that have developed in the labor unions of several of the skilled trades. One cannot accurately foresee the exact nature of the readjustments in labor-union apprenticeship policy required by the adoption of such a policy. They would have to be substantial in some trades, however, or the established unions would find their leadership challenged by the growth of new competing groups of non-union workers in their trades.

Additional vocational training and guidance are needed in urban as well as rural communities. The need is more urgent in the rural communities, however, for it is these communities that produce a surplus of labor which must migrate to urban centers, and not vice versa.

THE SUCCESS of 300 high-school and 200 elementary-school boys and girls of Elmore County, Ala., in combining vocation with education is told by Maxine Davis in *Lots Goes on Here* (COUNTRY GENTLEMAN for March). Pupils of Holtville Consolidated School operate their own hatchery, cannery, refrigerating plant, farm- and terracing-machinery rental service, and the only beauty parlor, bowling alley, movie theater, and newspaper in the community. Elmore County is cotton country. But James Chrietzberg, principal of the school, believed he had counterbalances to what low cotton prices, erosion, and improper diet were doing to his community. Ivy Wilson mortgaged his farm for a $7,500 FSA loan to the school. Others helped. The experiment is 3 years old. Last year the hatchery had 100 customers, hatched 40,000 chicks, and made a profit of $308.10; the refrigerating plant served 205 people, cured 40,000 pounds of meat, and netted $385.31. The cannery enabled 104 families to store 8,350 cans of 24 different products, but broke even since it charges customers only the cost of the cans and a small canning fee. One thousand acres have been terraced and 10,000 peach trees planted on one-time cotton lands.

The January centennial number of PRAIRIE FARMER, 192 pages in magazine form, contains a story by Rowland Wood called *Chemurgy: Philosophy of Abundance* that traces the development of interest in farm chemurgy since the first issue of the periodical. Although the ideas back of farm chemurgy are old, the growth of productive capacity has aroused new interest in it. Its objectives are the development of new industrial uses for crops, the development of new crops for new and old uses, and the utilization of farm byproducts and wastes.

Conservation, A LASTING EMERGENCY

By CLAUDE R. WICKARD. *The Secretary of Agriculture points out here that in the great new tasks before us we should remember a great, continuing task, the obligation of conserving our soil and other resources.*

OUR WAYS of thinking change greatly in times of emergency. Problems and projects tend to find new levels of importance, whether high or low. We see some things more clearly. We care more about evaluating what is good and true and enduring. But sometimes crises force upon us a different set of thoughts and plans and tasks.

We are now in that position. We are engaged in a great defense program, in which agricultural preparedness has a big part and which is so important that it obscures the less valuable of our previous concerns and emphasizes the value of our more enduring tasks.

Conservation of our human and physical resources is among the latter. Conservation is not a competitor of national defense for attention. It is an adjunct to defense and permanent peace and welfare. It is a force whose worth times of crisis only emphasize—an obligation not to be obscured by a new challenge, no matter how momentous.

I mean conservation for use, not just saving, or hoarding, or holding on to what one has. Conservation as opposed to exploitation. Conservation as national insurance, national defense, and national welfare. Conservation of soil to the extent that people are helped to a better life, and conservation of resources and physical and mental health.

We in the Department of Agriculture are deeply concerned with conservation planning and the conservation of soil; in that task we can get support and inspiration from knowing that it is a vital and tangible part of the broader aspect of conservation.

The purpose of the soil-conservation program is to protect America's productive acres so that they may contribute, under wise and continued use, to a better standard of living for everyone. In this sense, better farm income, security of farm tenure, stabilization of rural communities, adequate and efficient agricultural production, and a reduction in public and private losses caused by silting, floods, and drought are all bound up in this broad conservation effort; and conservation of the soil and its fertility becomes something more than merely throwing up defensive earthworks against the physical

forces that attack the land. It involves dealing with other forces, less direct and more subtle, that must also be met if the physical accomplishment is to have human significance.

Economic pressure on the workers of the land, for instance, must be relieved before the workers in turn can ease their pressure on the land. An insecure tenant—say, one with a 1-year lease—is likely to show little interest in building new terraces to hold the soil. Give him security, however, and his interest becomes much more closely merged with the best interests of the soil he tills.

Similarly, we know that trees can hold the soil on an eroding hillside cornfield and that many a farmer wants to see trees planted there, but we also know—as the farmer does all too well—that a tree crop in 10 or 20 years won't help him to meet the mortgage payments due regularly every year in the interval. But with some certainty of a fair and steady income, a farmer might find a way to plant those trees and save his hillside. Listing will stop the soil from blowing on a man's own farm, but it doesn't keep unlisted soil from drifting over from the next farm owned by a druggist in Chicago.

Pressure on the Land

And so it goes. Tenancy, income, and absentee ownership—these are some of the sources of pressure on the land. And this pressure must be removed, or at least relieved, before a complete conservation job can be done. This pressure exists often enough and in proportions serious enough to demand the full attention of our conservationists and to require a coordinated effort in all our Department programs.

Until recently, the word *conservation* had a much more limited meaning and use in our national vocabulary. We tended to think of conservation as involving trees or land alone and as being dissociated from people on the land. As a nation we permitted our soil resources to dwindle. Maybe there is some connection here as elsewhere between our thinking and our actions. Whatever the reason for this disinterest—and scores of reasons have been advanced—it must be incidental to the fact that we are woefully late in linking the needs of people and the soil together in our efforts to meet the situation.

The result is that today we have, literally as well as figuratively, a vast amount of ground to cover. Altogether we have in the United States about 462,000,000 acres of good-quality, arable land, including the land now in cultivation and the land that may be cultivated in the future. Almost two-thirds of this land—approximately 330,000,000 acres—is subject to erosion. In addition, more than 600,000,000 acres of pasture, grazing, and forest-land in private ownership are eroding or subject to erosion if poorly handled. And millions of acres of forest lands are, or have been, cut without regard for public values.

Today—Tomorrow

To hold this land, to protect it while it is in use today so that we may use it in the future, is the plain physical aspect of our conservation job. It is part of the job, also, of course, to maintain and build fertil-

ity in these areas. The store of essential plant nutrients in the soil must be maintained against the drain of cropping and leaching as well as against complete removal by erosion.

The human aspect of the job requires that we hold the people, too, that we provide means whereby the physical task can be accomplished without undue hardship on the people who must do it. Only this dual approach, based on a full understanding of the needs of both soil and people, can bring us finally to the goal we seek.

What progress are we making toward that goal?

As a nation we are now engaged in a broad conservation effort designed to bring immediate improvement in our agricultural position, internal national strength in preparation for any emergencies, and a healthy agricultural plant for the future.

Because so little was done in the past, we must do more than our share today; but the Department's conservation program is proceeding to do whatever can be done, wherever it can be done, with the facilities at our command.

With a field so big, and a need so urgent, the energies of all agencies can be consistently applied to advantage.

What Is Being Done

In 1940 more than 6,000,000 farmers took part in the Agricultural Conservation Program of the AAA. They operated more than 355,000,000 acres of cropland, about 80 percent of the Nation's total cropland. By planting within acreage allotments, they have been able to rest part of their land from the production of soil-depleting crops.

On all of these farms, too, some acreage has been protected or improved by conservation practices. By bringing about new seedings of legumes and grasses, the adoption of strip cropping, contouring, and summer fallow, the application of lime and superphosphate, the seeding of green manure and cover crops, the construction of terraces, the planting of forest trees, and the use of other conservation practices over millions of acres, the forces of erosion are being slowed down and the fertility of the soil is being built up.

Under the AAA range conservation program, conservation practices have been applied to millions of acres of range lands in the West and Southwest.

Less extensive, but no less important, is the program of the Soil Conservation Service. By the end of 1940 virtually complete and permanent protection against erosion had been provided under this program for more than 50,000 farms. Intensive conservation work of the same kind was under way on an additional 70,000 farms. Other thousands of farmers were applying for help in this complete conservation treatment.

An Integrated Program

Soil-conservation districts are formed on this premise: That conservation of the soil, to be permanent, complete, and most effective requires treatment of the land according to its needs and the use of the land according to its natural adaptabilities—field by field, farm by farm, and watershed by watershed—until the pattern is extended over all the lands now menaced by erosion. In the

429 districts organized by farmers in 37 States by the beginning of this year, this principle is being put into operation through community action. Through such processes as petitions, referendum, and election, farmers in these districts are working toward a solution of their local conservation problems.

The Forest Service and the Farm Security Administration have major conservation programs operating through the Nation. The Forest Service manages about 175,000,000 acres of national-forest land for the purpose of timber production, watershed protection, and other forest uses; and through the Clarke-McNary and other acts gives guidance and assistance to private owners of forest land. One of our continuing goals must be to see that other millions of acres of cut-over forest land and farm woodlands still badly in need of restoration are brought under a full conservation program through the adoption of good forest management practices. Here, too, our interest in conservation must be tied in with the welfare and security of the people primarily affected by it.

The Human Side

The job of conservation that the FSA is doing is particularly important because of its emphasis on the human side of conservation. By directing its county supervisors to participate actively in county land use planning, and by insisting upon better leasing arrangements for its clients so that security of tenure will permit better soil conservation practices, FSA is effectively linking land and people in conservation efforts cooperatively undertaken with other departmental bureaus.

Similarly, land-purchase and flood-control programs contribute to an over-all conservation program for the Department, one broad enough to cover all areas and yet unified enough to prevent needless duplication and overlapping.

In this work of unification, the land-grant colleges and the Department of Agriculture are actively cooperating. The process of land use planning through local committees of farmers in which these agencies are active is more than a means of pulling together the various strands of conservation work which the Department has under way.

The land use planning work is a full recognition by the Department and the land-grant colleges of the paramount importance of two conservation factors. One of these is that, use being the key to genuine conservation, cooperative consideration must be given to problems of land use which cross the boundaries of single farms or of single communities. The other is that the knowledge and experience of farmers themselves must be drawn upon in the communities and counties to help chart the future of conservation effort.

Broad as the present program is, however, we as a nation are still operating years behind schedule. Even the most optimistic believe a quarter of a century at least will be needed to put our national farm plant in order physically. Probably the job will take longer than that, for even if the physical protections can be completed in that time, the complex economic adjustments we will need to make if the job is to be permanent will likely require even more time.

Mr. Higgenbottom Tells his Story

THOMAS BENJAMIN HARRISON HIGGENBOTTOM *was an Okie. Now he considers himself a Californian. He, his wife, and three of their seven children appeared in Los Angeles before the House of Representatives' Special Committee Investigating the Interstate Migration of Destitute Citizens. John H. Tolan is chairman of the committee. Mr. Higgenbottom's testimony about his experiences as a migrant is presented here (in a somewhat condensed version, because it is long) not necessarily as an endorsement by the Department of his views but as an interesting social document that gives another aspect of a pressing problem. The major deletion in the testimony has to do with his fruitless attempts to get help from employment offices. Questions and remarks by the committee chairman (and, in a few instances, by committee members) are italicized; the rest is the witness' story.*

Mr. Higgenbottom, will you give your name?

Thomas Benjamin Harrison Higgenbottom.

And where do you live?

Fresno.

I want to say to you folks that we have been all over the country and that you do not need to be afraid of this committee. We have met a lot of so-called migrants and you look just as good to us as the governors and mayors and everybody else, so we want you to tell about your experiences, and just relax and don't worry about us. You will not be asked any sharp questions or anything of that kind. . . .

And what did you do after you got married? Live on a farm?

Yes, sir.

What kind of a farm was it?

Just a general farm—cotton, corn, oats, and such as that.

Did you buy the farm?

No; leased from an Indian.

How much money did you pay for it; that is, lease money?

Two hundred and something a year. Then I did some building on it and cleaned up quite a little land.

Was your father a farmer before you?

He was also a farmer.

Did you make any money on that farm?

Well, I don't know. We made a living. We did fairly well. We couldn't complain.

And when did you leave that farm?

I left it the first year. I sold it out after I cleaned it up and built a house and built the fencing; some fellows moved in from Arkansas and I sold out to them in one day. I think I got $1,800.

Cash?

Cash money.

Then where did you go?

We rented a farm over by what is known as Slick. It is the oil town, Slick.

How did you make out there?

Well, we did fairly good. We had taken what is known in our country as malaria fever and chills. It developed pretty much over the country at that time, on account of the rains.

Well now, Mr. Higgenbottom, how long did you remain there?

We stayed 1 year.

Did you make any money there?

Yes; we made a little money. We got ahead. We accumulated quite a little stuff around us—generally a farmer does—and we moved from there to another farm about 5 miles from there that belonged to a banker. We did extra good there. We hit a good crop.

From there we moved to Kansas, where her folks lived. We had taken—we rented a farm there of about 640 acres. It was mostly in alfalfa and in grass, and raised two or three hundred acres of crop. We stayed 1 year.

There was a bunch of wheat growers come in from the West. At that time the war was on pretty good, you know, and so we sold out, sold our stock and went back to Oklahoma. I figured we could do better there; knew our country. We rented a farm down close to Muskogee. We did fairly good. We made a good crop, I guess about the best crop there was in the neighborhood at that time; corn and cotton.

Then we moved close to Tahlequah, Okla. We stayed there on that farm 2 years and it wasn't large enough, so I moved to another farm and bought a farm at the same time.

We moved about a mile and we didn't do quite so good that year, but on our own land we had quite a bunch of cattle. That was about in 1920.

We had a free range and we bought quite a bunch of cattle and had them around. It cost us $100 apiece and there is where the drought caught us with those cattle. Lots of people say if I could look forward as I do backward—those cattle brought me $10 apiece and I give a hundred for them. Of course, I had a little mortgage on some of them and to quiet the mortgage I just sold enough to lack a little of paying the mortgage. I owed a little land note and I didn't have money enough, so I sold two hounds for $165.

Two what?

Two hounds; running hounds.

They must have been fast.

Well, I sold them for $165. I sold 16 head of cattle for $160, but two hounds brought $165.

Why didn't you go into the hound business then?

Well, I did. Just about that time, the time I got into the hound business, the Osage Indians, they didn't have any money to spend. Oil went down.

The hounds went with them?

So they quit buying hounds.

Hounds like I sold were selling for $10 apiece, and I give some of them away that I raised. . . .

We stayed there about 5 years on that farm and we sold it. We moved on a larger farm about 2 miles from there, in the same school district the other farm was in. We put in quite a bunch of—quite a crop, I guess about the largest one there was in the country, and I guess the best. I stayed on that place 4 years.

I think I had taken about $1,000 cash on the farm and the last year I was on it, I had 27 head of cattle when we left and I was in debt $500 and I left with 3 mules and a pony and no cattle at all.

Don't forget the wife and children.

Of course, all this time, why, I was accumulating a little larger family.

Well, I would say you had made a good showing with your accumulation, all right.

Now, this boy here—we left Oklahoma 3 years ago, and as young as he is, I put him out with a mule, running out in the cotton, and I put them all out; these girls, both of them. All of them, you see, I start pretty young to farming so if I get behind or something, why I let them do the work and they can all handle mules.

We moved from there and we went about 30 miles west from there to Wagoner County, and then we started farming there. At the first year I had taken $500 worth of debts and moved them over to this bank, from one bank to the other, like we generally do when we move; transfer our debts to the other county.

This is a new one to me. You go to one bank and pick up your debt and transfer it to another bank?

Yes.

Did you have any trouble doing that?

Well, not too much. There is a whole lot to the person. You know the record generally follows a fellow, if he pays his debts. . . .

We made a crop that year; made a pretty good cotton crop and corn crop. Everything was fairly good. The lightning killed two of my mules in one night. There come up a little thunderstorm. Then it was not very long until there was a little cyclone hit through there—didn't hit quite at our place, but it hit—and we had a good horse, about as good as there was in the country, I guess and he run into—he got excited and run into a tree and broke his neck. That left us with one mule.

Well then, I went to buying what is called scrub stock for $10 and $15, you see. I got down to where my credit wasn't good with the bank any more because I didn't have any security.

So along about that time the plow-up program come.

You see the reason that I always get the children to help me, we all work together. If I am out in the field, my shadow amounts to a whole lot out in the field. I always try to stay out with them, because maybe they get tangled up with the horses or something when they were working but it is not long until they can go along.

Along about that time they come through with the cut on the cotton acreage. They cut the cotton acreage. On the farm I was farming, it was just adapted to cotton. That was a cash crop. You see, we farm corn, wheat, and oats just enough, you know, and we didn't want to get into it very large on account of

it cost so much for machinery. I have the hands to handle the cotton, and it requires quite a little work.

Let us see, in '28 it was—I am going back—the reason I left over there was that I didn't make anything. It rained the entire year. The corn was awfully good, and the wheat and the oats that I had, about 150 acres of wheat, and all that, were good; but the rain wouldn't let you get in the field and cut it. It just fell down. And the cotton, in the rainy season, the boll weevils worked awfully bad at that time. On 35 acres of cotton I finally picked out a bale of cotton. On 10 acres I never got a bloom on it on account of the weevils. But we had tended it good before we knew it wasn't going to make anything.

So I lost my wheat and other crops and the weevils ate up everything on it except the mortgage. I had a pretty good mortgage on it. The banker, he held the mortgage and was a little luckier. He had the mortgage in a safe place. That was the reason why I had taken and I sold my cattle. Then I moved to this Wagoner County.

So that was the year that my horses died. I stayed there on that place. In '33—I will go on up to the story where I was—in '33, I think it was along about that time, why I got a pretty good bunch of cotton hands. We could really go to town on it. We raised it and we generally had the finest flower garden in the country. The girls come in at noon and I had seen them, they would grab the hoe and go out and handle the flowers. We had the finest flower garden that I seen anywhere. In fact I made a trip to Indiana and back and I didn't see as nice a flower garden.

Along about 1933, I think it was, they had—you know, they called it the cotton reduction. Well, on this farm, why they cut my cotton. I generally raised about 40 or 45 acres of cotton and I put in for it, told them how much cotton I raised—the truth. I always got by the bank with the truth pretty well, found out it generally paid. But on this occasion, why there were several in the field, you know, that were in the country, and when the cotton acreage came out it was nearly twice as large as ever had been planted in the county. I seen then I was hooked. I wasn't a very good hand to stay in the game or I wasn't a good liar. Well, when they come through, they caught the fellow that told the truth and they cut his acreage down, which had taken mine down half or very near half. Then they give it another reduction. But many fellows in there, probably that maybe planted 4 or 5 acres of cotton said they had planted 50 and 100, because they seen what the Government payoff was, and everything, saw that it was a paying proposition, and they wanted lots of cotton. You see, there was no check-up that was given, much.

Anyway, you didn't make it go there, is that right?

So when the cotton acreage was cut, my children—I finally landed with 16 acres of cotton, with a big family that could do the work, you know, on approximately 40 or 50 acres of cotton, and do the other work growing the living, which we had to have—I can raise cotton a lot cheaper than you can if you hire the work done on that basis. I did that in order to keep my children at home and, of course, if I was going out here and hire a lot of work done, on

the cotton, I wouldn't go at it that way. But in order to keep my children to home, I can work them at home and they would all be at home and we could raise largely our own living, but it takes some money.

The cotton acreage was cut and a couple of the older children says there is no use of staying there. "We will go hunt us a job." Of course, that throwed a little extra labor on the market, as two of them left home. But I always want to keep my children home. They have never been back since they left, since they left home. They stayed away. One of them went to Arizona to pick cotton and stayed his 6 months and came back for a little while but no more. There wasn't no work at home because we could handle the 16 acres of cotton just, you might say, a one man's job.

Then we moved from that place to another place about 5 miles from there.

In Oklahoma?

In Oklahoma. The first year—it was '36—it was the drought all over the country. We didn't make anything. We had a few potatoes. We made quite a crop of potatoes. They were a fairly good price and would keep us from starving to death. In the fall we hooked up to the truck and went to Texas to pick cotton. We left the family there to do the work and we left quite a little canned stuff and fruit and they had milk and butter and everything. We come back and we were hunting location. We want to get somewhere where we might farm. We didn't want to sell our crop or teams and stuff, so we went to Texas and we picked cotton. Texas was somewhat of a failure, too. We didn't make too good. We made our expenses and come back. Not any better off than when we left.

So in '37—'36 and '37—why we made nothing.

That winter—we generally keep quite a bunch of chickens and milk cows and hogs around—we come back and we started in to make another crop and I put in for the FSA loan. I went to Muskogee and I got a producer's loan. I already had that on this crop, you know, and it didn't pay off anything so I had to get an FSA loan for feeding.

Well, there was nothing made. The chickens, along in January and February—it was awfully cold—we lost, I guess, two or three hundred chickens that starved to death. We lost one mule, one cow, just on starvation. We got our FSA loan after we got most of our crop planted and it was a big help when we got it, of course, but we didn't get it in time. If I could have got that loan to have bought feed, you know, the first of January, I could have put the chickens to producing and went on. But everything went against me.

So I says, "Well, now, this is our last crop. I will never see anything else that I have got starve to death."

So you left there?

I made that crop and sold out, paid up—I don't owe no banks—paid the FSA loan off and paid the producer's loan off, and it left me a few dollars, and I loaded in just a little stuff one morning and we took a notion to leave.

How many children did you have at that time?

We had five with us at that time.

So you loaded up the wife and the five children in the car, and at that time did you know where you were going?

Well, we heard of Gilbert, Ariz. That it was a good cotton country.

How much money did you have when you left?

I don't know. It was forty-some-odd dollars I think.

Eight of us rode in what is called a roadster, A model. It was pretty well crowded. I have seen lots of them and wondered how—it was cold weather, as it was in December. . . .

Where would you sleep at night?

We generally got tourist cabins, cost 75 cents or $1.

Did you go right into Arizona then?

Yes; about 27 miles southeast of Phoenix.

Where did you live there?

We lived there in a tourist camp and picked cotton.

Did the children help you?

Yes; we started in picking cotton. The cotton picking was pretty well over with. We would make $4 a day. I was a pretty good cotton picker, but the cotton was pretty well over.

How long did you work at $4 a day?

Until the first of 1938. Then I got on a job on a dam at Mormon Flat.

Well, when did you leave that place in Arizona?

I left in July and went to Eloy, Ariz.

And all the time you lived in these tourist camps?

Yes.

How much did you pay for it, did you say?

$8 a month; $8 and $10.

You carried your bedding, of course, with you?

Yes; it was a mighty filthy camp. We didn't want to stay, but conditions—the money didn't let us.

Where did you go from there?

We went to Eloy, Ariz.

What did you do there?

Picked cotton.

How long were you there?

We was there 3 or 4 months, I guess.

Where did you live there?

We lived in a cotton camp, in tents on the ground, you know. We had a 12 by 14 tent.

And the eight of you lived in that tent?

Yes.

Was it cold?

Well, it wasn't so cold. It was dusty, you know. That dust—we would have to carry water and sprinkle down on the ground to keep the dust from rising, and then the wind would sometimes blow the tents.

You had to carry your water you say?

Well, yes, sir; a couple of hundred yards.

I suppose you had the latest sanitary appliances in those tents, toilet facilities and everything?

They was the earliest, I think. There was lots of brush down through the country. If we wanted to change clothes, and if there was anybody around, we had to go down there—if we wanted to go to town or anywhere—we would go over down by the brush there and change clothes and come back and go to town.

How long were you there, Mr. Higgenbottom?

We were there until in January. We was there when they quarantined us for smallpox.

You see, the smallpox come through there and we could walk around in the field, you know. This

fellow was quite a cotton farmer, and my bunch was vaccinated—or that is, we thought they were all vaccinated from smallpox at Gilbert, in the schools, and so we had these smallpoxes. They would come out in the field. They was just as scabby as goats, you know, picking the cotton. The people would tell the health officers.

Well, the fellow had his way for getting rid of those kind of fellows. It was to fire them. When they would break out with smallpox he would fire them. That would keep him from losing his cotton camp.

Well, they would go over to some other cotton camp. Finally I kept this girl here from school. She was—her head, you might say, was a solid scab; just broke out with smallpox, and here comes the school fellow, you know, "You got to send her to school in the morning. You see that she is in school."

We were keeping them out of school once in a while to pick cotton, and I don't blame him for kind of kicking up a fuss. We would have to get up the grocery bill. Some days we got to do work and sometimes we wouldn't.

He was gone about an hour or 2 hours and here the health officer brought her back. "You keep that girl from school. Why didn't you keep her out? You have had the whole school quarantined over here."

Well, I said, "That is too bad." They quarantined the camp then over this. We was under quarantine 21 days and they fed us.

The way they issued groceries there, the fellow that was "abatching" in a tent, he got just as many groceries as a fellow with 15. Everyone got so much. We got about enough to maybe get a meal if we could eat it. I know we got some bacon one time—they was pretty liberal with us, they gave us some bacon—and we boiled it with beans. We couldn't eat it any other way. We thought it would season the beans, which it did. We went to cut it, and you could stick a fork in it and push it out over the plate. We figured it wasn't much to eat so we threw it out. The wolves would come up within 20 feet of your tent and howl of a night.

We left—we went to the camp, what was called the cotton camp. We stayed there 2 weeks and we was picking cotton and one morning we woke up and looked—it was a tin shack and awful floors—it was just dirt, you know—and my wife she looked through into the next room, through some holes through the tin, you know, and there was a woman picking lice off her children, so we loaded right away and got out as quick as we could get out. We came to California. They had the police officers over here at "Calpat." We went in a Government camp there at "Calpat."

You mean a Farm Security camp?

Yes, a Farm Security camp; emergency tent camp.

You had nothing but tents there?

Tents was all we had there.

Was that a little better lay-out than the one you left?

Yes. We had showers. We had everything that was kept clean. There wasn't no papers blowing around and everything was just kept clean.

How much did you pay there for that?

Didn't cost nothing.

How long did you stay there?

We stayed there until it moved,

and then we moved with it to Beaumont, Calif.

We didn't make any picking peas because I have seen 1,500 in one field and each one would get a hamper of peas and leave. I have seen them fight over rows, they wanted to pick peas so bad.

How much did you get for picking peas?

Well, when we first went there they was giving $1.25 but in a little while they cut it down to $1. They figured they couldn't pay any more. Peas was only 16 cents a pound.

Then we went to Beaumont and picked cherries there, and lived in the Government camp there. From there we went to Thornton, Calif., up north here. We found very little work there. The Filipinos were doing the most of the work there in the tomatoes. We worked a little in hay and then we went to San Jose and worked in the apricots. Then we went back to Thornton and thought we would work in the tomatoes, but the Filipinos and the Japanese got all the good tomatoes, which I guess they know how a little more than the average fellow. Then we went to Visalia and worked a while and then back to "Calpat." I worked in a hamper mill last winter. Then we go back to Thornton and we are here a while and then we go back and are working at Thornton.

Are you at Thornton now?

No. We just left there. We moved.

Where did you live at Thornton?

In a Government camp.

How did you like it?

Well, the Government camp is far ahead of any outside camp, you know. You have got it sanitary. It is not desirable on account of the children, you know—moving around. Then we moved down on a farm.

And where are you living now?

I am on a farm 5 miles north of Fresno; on a small farm.

Did you buy it?

No; I havent bought it.

Are you trying to buy it?

I am figuring on trying to stay there another year and farm.

What kind of a house have you got?

It is a two-room house. It is not the best, but then it is better than camps.

Have you or your wife ever been on relief?

We have this year. We have got groceries twice, I think, on relief. We was forced to get them at "Calpat" last winter, and then when I went to Thornton I went and got them.

That is the only time?

Yes. We was on relief last summer two or three different times—maybe more—to get groceries.

Did you have any trouble getting these groceries or money on account of not being a resident of California?

No. That was the FSA.

The FSA. Oh, yes. You never applied for relief to the State of California or Arizona, did you?

No.

And so what started you off from Oklahoma was that you just made up your mind that you couldn't make it go there? That is the idea?

Well, it was useless to stay there, you know.

And the climate of California—you didn't know or didn't hear anything about that, did you, before you started?

No.

Do you want to go back to Oklahoma?

Well, no; I don't believe I do. I have better health here than I had back there.

The children are all well, are they?

Yes.

Are they all going to school?

Three of them are.

Well now, if you had a farm and could make it go back in Oklahoma, would you try to live there?

I don't know. We have had so many failures I would be afraid to risk it again.

There comes a time when people down there in the Dust Bowl area can't make it go, and rather than starve standing still they get out and move? Don't you think that is the idea?

Yes, sir.

Mr. Higgenbottom, do you consider yourself a Californian today or an Oklahoman?

Well, I don't know. The California people have always treated me mighty nice. I will have to say that.

Then you would consider yourself a Californian?

Yes.

I think that a great many Californians misuse the word "migrant." I think that it should be "immigrant" and not "migrant" because most of the people that come here expect to stay. Isn't that true, as to those that you have met working around?

I think there is a large percent of them that intend to stay. You see, the wages in Oklahoma—they are so scarce and there is so little, you know, 50 cents a day there is about the wage scale on the farm. You could put up a sign on a post—I did on potato picking—at 75 cents a day, and I think there was 100 come and I only needed 20. I didn't think about getting the whole country in; 75 cents a day to pick up potatoes, and they pick cotton at 15 cents a hundred, which is generally the scale of wages.

You mean back there?

Yes.

And here?

Here it is 85. You see, probably the cheaper wages there drives people out. Now, I know that has a tendency, to make money, you know, if you can get the work done for nothing, why of course you can afford to farm. That has caused a lot of farmers to develop their acreage, the large farms to develop their acreage.

According to the census figure in the last 10 years, a million people have moved out of the Great Plains States, the Dakotas, Nebraska, Oklahoma, Arkansas, and Kansas. We have had testimony introduced in hearings at Oklahoma and Lincoln, Nebr., by experts showing that 5,000,000 acres of land in the Great Plains States have 25 percent of the topsoil gone.

Yes.

You believe that?

Yes. It is fully that much.

In other words the soil in some of those Southern States isn't getting any more fertile and it is just going the other way, isn't it?

Yes.

Now, Mr. Higgenbottom, we thank you, and you, too, Mrs. Higgenbottom. You are a pretty fine family, and I am proud of you because we have heard a lot of eastern families testify and I think you are right up with the best of them. I hope you have a lot of good luck with the family and that you make your farming stick.

Better Farm Housing—

PROBLEM AND OPPORTUNITY

By FRANK J. HALLAUER. *It is not news that many farm buildings are poor or that farm unemployment is a pressing problem. But here is a new approach: Why not make one problem solve the other?—and make the most of an opportunity?*

IT IS HARDLY necessary here to argue the need for better farm housing or to picture the relatively low standard of housing for farm families. The facts have been presented over and over, and it is probably safe to assume general acceptance of these facts. The question is what should or can be done about it. None seems sure of the answer, but such solutions as have been suggested follow closely the solutions being applied to the corresponding urban problem of substandard housing. The purpose of this article is to suggest that farm housing be attacked as part of a larger farm problem rather than as an extension of the urban housing problem. If it is so approached, farm housing may be an opportunity as well as a problem.

The most widely accepted urban view is that low incomes are cause, and poor housing effect—that if the low incomes were increased, it would correct the situation. This is only one phase of the broader proposition that a more equitable distribution of income would increase consumption and solve unemployment and all related problems, including poor housing.

It is easy to prove wide disparity in income. *Consumer Incomes in the United States* shows that in 1935–36 only 4 percent of all families had incomes of $4,000 or more and received 25 percent of the total income, whereas the group with incomes under $1,000 made up 42 percent of all families and received less than 16 percent of the aggregate income. Available data indicate that urban families with incomes under $1,000 can not, in general, afford adequate housing. Either housing costs must be reduced for these families, or the families must have a larger income, or both.

Incomes are lower in the case of farm than in the case of urban families. In 1935–36, 57 percent of farm families had incomes below $1,000, or had received relief. Farm housing is below the level of urban housing in some respects and the costs of installing facilities are greater. The

interrelated problems of low income and poor housing are thus especially serious in rural areas.

Advocates of raising incomes as the solution to the problems of the lowest third have visualized appreciable increases in total consumption expenditures resulting from graduated increases in incomes. Such an increase in the level of income is not promising as a solution to the farm housing problem. In spite of revolutionary changes in agriculture, distribution of gross farm income by decile groups was approximately the same in 1929 and in 1889, as shown in the paper by Dr. Louis Bean in the December LAND POLICY REVIEW. Similar rigidity in income distribution is apparent in a comparison of the lowest, middle, and highest thirds of farm families with rural nonfarm and urban families as of 1935–36. The lowest third got the same proportion of the total in each of the population divisions. Presumably farm income could be increased to a par with urban income, and the lowest third would get only the same proportion it does now.

Higher Incomes

Perhaps recognition of the fact that the pattern of income distribution changes slowly explains the advocacy of direct subsidy or Government aid to housing as necessary to provide better urban housing within a reasonable time. Perhaps subsidy is simply recognized as one way of redistributing income and, at the same time, assuring that the added income will be used for housing. The subsidy, in one way or another, is related directly to cash income. This is wholly natural in the case of urban families, because urban family income is almost wholly cash income; so much so that income and cash income are synonymous in the urban problem. That is not true for farm income, and the point is very significant.

Roughly 50 percent of the average income of urban families is spent for food and housing. The percentage increases as income decreases. Food and housing appear in farm family income partly as nonmoney income, the part furnished by the farm. There is considerable question as to valuation of nonmoney income and as yet there is no satisfactory basis for comparing farm with urban family living. In fact, the disparity in income distribution as between farm and urban families may not be as much as is indicated by figures used in the third and fourth paragraphs of this paper. What is more important, however, is that such a large part of family income is within the control of the farm family.

Even though farm-family income appears to be much lower than urban, and the fact that food is such a large part of the family budget, farm people have a better diet than nonfarm people. Among farm families, excellent diet does not require high expenditure for food, but can be achieved by means of wise programs of home production.

Experience with diet improvement demonstrates the effectiveness of approaching the problem of better farm family living from the nonmoney income angle. There is still much to be done on diet, and housing has scarcely been touched. If we did not know this to be true, it is clearly indicated by the relatively low position of housing in the farm family budget when compared with the urban family budget.

Higher Standards

Poor farm housing is not the real problem, but is rather an index of a complex problem involving low income, accepted low standards, and lack of initiative. Life is a competitive proposition, and in general the relative standard of a family's living reflects that family's relative efficiency in supplying its wants.

It has always been and probably always will be true that one haven for the inefficient is the land. During the last depression, as in previous periods of distress, people who found themselves crowded out elsewhere sought refuge on the land. Larger numbers of farm people not well off on the land have never left it because they would have been even more handicapped in industrial competition. Refuge on the land should not be denied to those who need it, although that is implied when the proposal is made that urban industry should be made responsible for absorbing all unemployment, even that on farms, or that only those necessary to supply the Nation's need for farm products should remain on farms. Rather, the refuge should perform its function more effectively. That function should be to provide a home for the refugee and to improve his efficiency as a necessary step to a higher status in our economy, whether he is to remain on the land or find employment in industry again at another time.

Poor housing, poor diet, poor health, low income, low educational standards, and lack of desire are associated causes and effects; it is seldom possible to say that one is cause and another effect. Poor diet may cause poor health, which may cause lack of desire, which may cause low income, which may cause poor housing, which may cause poor health, which may cause poor diet. We can start anywhere and run through the chain. These evils have existed and have been the subject of much attention for a very long time.

Compared with a generation ago, conspicuous improvement can be cited in sanitation, in physical comforts, in education, and so on, but it is doubtful whether any change has been achieved in the relative status of the lowest third.

Knowledge is ahead of application. This is true in all groups, but it has particular significance when applied to the lower-income farm families. These families are not reached through the usual channels for spreading information. They do not read bu!letins and do not attend c o n f e r e n c e s or demonstrations. Their resistance to suggestion is greater than that of higher-income groups. Psychologists have recently emphasized the necessity for new approaches if these families are to be lifted out of their low status. A recurring suggestion has been the construction of community buildings. In a specific case a community center built by local people is recommended as the solution to wood-burning in the South—a social interest made to replace an antisocial tradition.

Of all pursuits from which profit accrues, nothing is superior to agriculture, nothing more productive, nothing more enjoyable, nothing more worthy of a free man.

—CICERO

Community cooperation in the building of better homes for the families themselves would provide the basis for a much larger program than just the building of a community center and should be a source of even greater stimulation to the members of the community. If such community action can correct an old tradition such as woods-burning, it should be equally effective in correcting poor diet, poor sanitation, lack of desire for education, etc. Various reports—*Guide Posts for Rural Youth* is one of the most recent—cite actual cases to support this, and point out particularly that to be effective a building program must represent the work of the community utilizing available local resources.

Farm resources in labor as of 1937 were estimated to include more than 700,000 unemployed males. Another quarter million were receiving some emergency employment. Of those regularly employed, half a million were classified as only partly employed. There were a million and a half families with incomes below $600, and it is safe to assume that these families have considerable unemployed time.

The existence of a large unemployment problem on the farm is really not news, just as it is no longer news that farm housing is as poor as it is. Why not make one problem solve the other?

Undeveloped Resources

Similarly, the farm has undeveloped resources in materials, including sand, gravel, clay products, and forest products. One-third of our commercial forest lands are in farm woodlands. They make up some 20 percent of all farm land and more than that in the areas where farm incomes are lowest. Two major farm forest problems have been to obtain better management of the forest lands and to provide better markets. But the farm itself is one of the largest markets for lumber.

Farm construction, which includes all farm buildings and not only the house, normally takes about a fourth of all lumber. Even so, the market is only partly developed. At least a third of the farms have never had the buildings they should have, and many others have been unable to pay for needed repairs and improvements out of cash income. However, noncash income can be increased by use of farm materials and labor in the construction or improvement of buildings. Some farmers have done this in the past, but the practice is all too limited. This would always be the case if left to individual farmers, because the individual farmer's need for buildings and his resources in labor and materials will not often balance. A community program is needed wherein the members can exchange labor, materials, and cash.

Better farm housing is only part of the need for better farm buildings, and the problem is to make the most of the opportunity to provide a profitable outlet for farm resources, to train people who have had little opportunity for training in simple building design and construction and in the use of tools and power machinery, to train them in better forest management and handling of forest products, to develop cooperation and community spirit to facilitate the dissemination of information in all fields affecting farm family living, and to increase noncash farm income.

Who Plants a Tree,
PLANTS PROTECTION

By PAUL H. ROBERTS. *The Great Plains shelterbelt project is 6 years old. Some skepticism remains about its values, but in this report of its accomplishments, problems, and nature, it is contended that shelterbelts pay dividends in protecting crops and soils, furnishing fuel, helping wildlife, and providing esthetic benefits.*

THE PRAIRIE STATES forestry project (the shelterbelt project) was initiated in the fall of 1934 under an Executive Order. Since then, about 14,000 miles of field shelterbelts from 5 to 10 rows wide have been planted on more than 22,000 farms in North and South Dakota, Nebraska, Kansas, Oklahoma, and northwest Texas.

Land and crops are being protected from the damaging effects of wind; small amounts of fuel and fence posts are being cut; in a few instances farm buildings have been moved from exposed locations to the protection of the belts; farmers' wives are putting up jam made from the wild plums; and school children and farm families are picnicking and otherwise enjoying the shade and greenery of shelterbelts planted during the past 6 years.

A great deal of skepticism attended the initiation of this work. It was widely publicized, but the nature of the work and its purposes were not well understood generally. Some foresters looked askance at it, and some still do, no doubt, at least as it may be considered a part and parcel of American forestry. Plains foresters, however, generally acclaimed the idea, and Plains dwellers, who from bitter experience with blizzards and everlasting wind, mostly were firm in the belief that shelterbelts of trees offered a sound means of affording protection from the damaging effects of wind, and of improving living conditions.

Skepticism has not been entirely dispelled today, but the miles of shelterbelts distributed over 100 or more farm communities attest that shelterbelts are an integral part of Plains agriculture.

The idea of a "shelterbelt" north and south through the Plains had been proposed from time to time since early settlement, and the idea generally seems to have been to provide a bulwark of trees against the encroachment of "the desert" upon the fertile Plains. Apparently the suggestion that gave rise to the present project was that narrow belts of trees be planted at fairly regular intervals through the central portion

of the Plains from the Canadian line to the general locality of Lubbock, Texas.

This general idea has undergone considerable adaptation to local physiographic and climatic conditions and to the needs of individual farms, but the idea of a systematic pattern for large areas of soils suitable for tree planting is still being carried out.

Viewed from an airplane or as might be charted on a map, each community concentration of shelterbelts would appear as an incompleted network of parallel and cross belts. In parts, the individual farm and even separate 40-acre fields have become completely enmeshed in the pattern, in others there are blank areas or disconnected segments of the pattern, but it readily becomes apparent that when the pattern is completed each will have a place in the whole scheme of interrelated protection, whether the individual belts run east and west, north and south, or "andy goddling" along contours and stream courses.

The determination of the general area in which shelterbelt protection would do the most good was based upon careful surveys, exploratory work, and correlation of known factors. Briefly, this is the transition zone between short-grass, permanent range land, and the long-grass prairies. In other words, the western limits of the area, often referred to as the "bread basket of the nation" judged necessary to maintain as permanent agricultural cropland, lie east of the so-called Dust Bowl areas. In this transitional zone, agriculture has proved successful in the past, but unprecedented drought and other conditions have upset the balance under which farming, to be successful, must operate. It is significant that there has been a definite concentration of the FSA grant cases in this same "high tension" zone. It is an area where the margin between ability to remain on the land and failure may be very slight.

Wind and Rain

Broadly speaking, two climatic factors—moisture and wind—are of primary importance to Plains agriculture. The two overlap at some points, as for example: Wind accelerates soil moisture evaporation and hence influences the effects of precipitation.

There is probably little that man can do about precipitation as such. A great deal can be done about saving it for growing plants, and notable strides in that direction are now being made. If all of it were saved, however, there would still be the problem of the wind, and it would still be an important problem. Probably most people think of wind erosion when one speaks of the wind problem on the Plains, because of the dust storms of recent years, and, while wind erosion does take a tremendous toll in the form both of land deterioration and human distress, it is not by any means the only ill attributable to the almost constant winds which characterize the Plains country.

One of the important adverse effects of wind associated with the erosion problem, and one that can largely be averted by properly established shelterbelts, is the factor of "blown out" crops. In the southern Plains it is not at all unusual for a cotton farmer to have to replant his field anywhere up to three or four times before he finally gets a stand,

and there is a sort of grim witticism among them to the effect that when they plant the first time they are "only practicing."

The Blow Problem

In the great winter wheat belt many farmers have to fight blowing out of the young wheat crop during the early spring months. Often they run their chiseling or listing equipment day and night during bad storms. Farther north, where corn and spring wheat are the principal crops, the blowing is mostly over before planting time, although occasionally late storms do injure crops. Throughout this area the "blow problem" must be met by working the land to hold it, whether or not crops are produced. This is a severe drain on the resources of the farmers.

It is well known, of course, that evaporation, at least from a free water surface, is accelerated by air movement, and that the rate of loss of moisture from the surface of the soil by evaporation is much greater where wind has a clear sweep. There is one other feature of evaporation that is also important, however, and that is transpiration from growing plants. Ever since agriculture began on the Plains, people have noticed and recorded the fact that during the period of critical hot winds that sometimes cut the corn crop in half within 2 or 3 days, crops in the lee of tree windbreaks, bluffs, or other barriers, do not "fire" so readily as those subjected to the direct sweep of the hot wind.

Livestock do better when sheltered from cold, winter winds, and they do even better in the lee of windbreaks than they do in sheds. The Montana State Agricultural College investigated and discovered that feed requirements for cattle wintering in the protection of trees were less than for those fed in sheds or in the open. There are also, of course, the very great considerations of human comfort in protection from the wind in summer and winter, and the fuel savings when farmsteads are well protected from the winter blasts.

Fuel

Aside from wind control, shelterbelts and plantations have other definite values on the Plains. One of them is in the production of wood for fuel and other farm purposes. Fuel particularly is a considerable and unavoidable item of expense to Plains farmers, particularly in the Northern States and in this "high tension" area. Eighty dollars to $100 of fuel grown on the land, instead of being purchased, may go a long way in spelling the difference between success and failure. Moreover, wood and wood products in excess of the farmer's needs find an ever-ready market, and they have the virtue, to a great extent, of being available for harvest when the farmer needs the money. Many a Kansas farmer has tided himself over a financial pinch by cutting posts from his osageorange hedge for the market, and many another throughout the Plains region has sold cordwood for city fireplaces to get some ready cash.

In the 1934 drought, between $2,000,000 and $2,500,000 worth of wood products were cut in Nebraska, mostly for fuel wood and fence posts.

Wildlife

Influence on wildlife, particularly

game and insectivorous birds, is another important factor in connection with Plains tree plantations. This was not fully appreciated until the shelterbelt planting program got under way. Lack of cover rather than feed appears to be the limiting factor in wildlife welfare in this region, and the shelterbelts become thickly populated with both perching and ground-nesting birds just as soon as the trees become large enough to support a nest or to furnish cover.

This protection is important also to domestic fowl. Turkey growers suffered serious losses during the Armistice Day blizzard of 1940. A Norfolk, Nebr., paper reported that losses were greatly reduced where the birds were protected by shelterbelts.

Besides their purely utilitarian value, the shelterbelts also have a high esthetic value. They are oases in a flat country—oases widely appreciated by all farm folk, but especially by children who escape from thousands of barren rural schoolyards to the shelterbelts to lunch and play during the noon hour.

Last summer 1,200 Kansas farmers from 20 counties gathered at the first shelterbelt planted in that State for a picnic lunch and ate from a table a quarter of a mile long set up between the rows. At Neligh, Nebr., 12,000 persons attended a forestry field day sponsored by 21 towns in north central Nebraska.

How to Grow Trees

Not all of the Plains is adapted to tree growing, at least on the broad scale demanded of shelterbelts for field protection. The western areas are too dry, even where the soils are friable, except where they be furnished with supplemental water. Even within the zone where average precipitation is sufficient there are large areas where the soils are too thin or too heavy for trees to make acceptable growth. The area, however, where shelterbelts can be made an effective aid to agriculture is still large.

In all belts a number of different species are used, for two principal reasons. It is necessary to have low-growing species to stop the sweep of the wind as the taller trees mature, and to stop and hold snow within the belt. The other is to avoid the possibility that some epidemic of disease or insects might wipe out a shelterbelt because it is limited to one or two nonresistant species.

It is important to use racially adapted strains in growing trees on the Plains, a fact that has not been sufficiently taken into consideration in the past.

One other prime consideration in growing trees here is that they must be cultivated as meticulously as any crop. During the first few years on any site, and perpetually on many where the water table is low, trees depend upon the moisture in the top 2 or 3 feet of soil; if this moisture is pumped out by grass and weeds as fast as it accumulates, the trees will not flourish. In a few cases in the early days of the project, belts were planted along the partition line between two farms, half of the belt being on one side and half on the other. Occasionally one of the farmers did not take good care of his half, although his neighbor did, and the difference in survival and growth is clinching proof that a secret of success is careful cultivation. Of course, cultivation is not

needed after the branches of the trees meet and thus shade out competing herbaceous vegetation.

A Cooperative Program

The program is carried on under a cooperative arrangement with the landowners. Generally speaking, the Forest Service grows the stock and plants it, and the farmer prepares the planting site, furnishes the necessary fences, and cares for the plantation. Actually, because the project is operated entirely through the use of WPA funds, some hand labor (like fencing and hoeing) is performed on the belts by WPA labor. Special machinery has been developed and is sometimes lent farmers for cultivating. Poison materials are furnished the farmer to control rodents. The Forest Service furnishes the technical advice to the farmers in the care of the belts, and for 1 or 2 years subsequent to the initial planting replaces such losses as appear necessary to assure the establishment of an effective shelterbelt.

As mentioned previously, the project uses only WPA money, no specific appropriation having ever been made for it. A definite proportion of the funds must be used to employ relief labor, and the remainder is not enough to carry on the project effectively. To make up the difference, counties and municipalities where the program is being carried on help out by furnishing warehouse and office space, trucks during peak periods, and services and supplies of other kinds.

The Future

The project began its planting work in the spring of 1935, but because of the lack of suitable planting stock, only 129 miles of belts were planted on 263 farms. That year the project established its own nurseries and since that date has planted 14,146 miles on 22,691 farms in the Dakotas, Nebraska, Kansas, Oklahoma, and western Texas. A total of 164,000,000 trees has been used, including replacements.

Of this, 462 miles of belts, or 3.2 percent, have been written off the books as failures, due either to some fault of location or lack of care by the cooperator. Others will be written off as time goes on, but it is expected that about 90 percent of the belts will grow into acceptable windbreaks.

The shelterbelt planting program is not a panacea for all of the ills that afflict the Plains region, but it is a necessary ingredient in any prescription for a stable agriculture on the Plains. If the program had been initiated 50 years ago, or even 25 years ago, untold millions of dollars worth of permanent damage to the soil would have been avoided, thousands of farm families would now be in a stronger financial position, and the problem of migration from the area would not be nearly so great.

As far back as 1880 the Kansas Horticultural Society said in its annual report: "Those settlers who planted shelterbelts and groves are fixtures on their land, while those who never planted trees have pulled up stakes and gone elsewhere."

Many farmers have "pulled up stakes and gone elsewhere" since the Kansas historian of half a century ago voiced his lament; if planting trees will help these people to carry on as contented citizens and producers of wealth, surely the path is plainly marked.

Small Farms IN THE SHRINKING WEST

By A. M. RICHARDSON. *What is a small farm? How does it differ from a big farm, aside from the difference in size? What, indeed, is the difference between a "big" farmer and a "small" farmer? These are questions occasioned by the sudden growth in the number of small farms in Washington and other parts of the far West—an erstwhile land of great distances.*

THE WEST long has been called the land of the great open spaces. Yet today a good portion of the far West is facing a new problem of smallness—a problem occasioned by the sudden and continued growth of the number of small farms, and one that requires attention by all agencies interested in the welfare of agriculture.

The term "small farm" is often used without proper understanding of its meaning. Subsistence farm, part-time farm, small farm, family-size farm, large farm, corporation farm—all these terms vaguely refer to size of farms.

But even some study does not entirely clarify the point. A subsistence farm does not produce for sale. A part-time farm does not produce enough income to support the farm family. A family-size farm supports the family by the labor of the farmer and his family. A large farm requires hired labor regularly. A corporation farm is handled like a corporation. None of these definitions refers specifically to acreage. In the far-flung Big Bend wheat area, 500 acres may be a small farm; in the closely settled and intensively tilled Puyallup Valley, 20 acres is a large farm.

For the purpose of definition, then, a small farm may be classed as a subsistence farm, part-time farm, or the type of farm that requires small acreages, such as a family-size dairy, poultry, fruit, truck, or specialty-crop farms. The 1935 census listed 46,567 farms in the State of Washington with fewer than 50 acres. This was more than one-half of the total number of farms in the State.

Here again we find the problem concentrated on the coast, where land is either fabulously fertile or barely tillable and large population centers and booming industry afford some opportunity for part-time work. Of the farms with fewer than 50 acres, 30,856 are in western Washington and 15,711 in eastern Washington. There is a total of 772,938 acres of cropland and 48,246 farms in all of western Washington. Yet in Whitman County, alone, in east-

ern Washington, there are 1,014,644 acres of cropland and only 2,751 farms.

With Pierce and Whitman Counties as examples of the 2 areas, we make further comparisons. The average size of farm in Pierce County is 27.6 acres; in Whitman County, 482.6 acres. The average Pierce County farm has a value of $4,292; the average Whitman County farm is worth $20,415. The average value per acre in Pierce County is $155.60; in Whitman, $42.30, including land and buildings. Most of the farms in Pierce County would be classified as small farms; approximately 75 percent would be classified as subsistence or part-time farms.

These subsistence, part-time, and small farms are as much a part of the present national economy as any other type of agricultural endeavor. Too many agricultural economists think of every farm as a full-time farm; too many college recommendations are based on this same erroneous assumption. Some consideration must be given the small farm operator.

The present trend is toward more and smaller farms in the small-type areas like western Washington, and fewer and larger farms in the large-type areas. As far as the small farm is concerned, no immediate reversal of this trend seems likely.

Turning from the physical characteristics of the small farm to the types of operators, we find more subjects for study and more need for specialized action.

On the family-size small farm the farmer is there for the same reason that the large type farmer is on his farm—to make a living and achieve security for himself and family, and because he likes farm life better than any other and sees more possibilities there than anywhere else. He is there from choice.

Such farmers mostly are well trained, and have a background of farm experience that compares favorably with the background and ability of any skilled laborer. They have a volume of business large enough to give them full-time employment, and have as good an income and as favorable living conditions as men on larger farms or in other comparable occupations.

The part-time farmer theoretically should prosper in proportion to his volume of business. For instance, if 16 dairy cows, 1,500 hens, or 10 acres of small fruits or truck crops would be a family-size farm, a man with 8 cows, 750 hens, or 5 acres of small fruits or truck crops should figure only half of his income from farming. Too many farmers in this class expect a full-sized living from a half-sized farm. Perhaps when they bought their places and started farming, prices of agricultural products were higher than now, and other work was available to supplement farm income.

A part-time farmer in many cases is on his way to full-time farming. Many of the part-time farmers would probably be classified as "unskilled laborers" because they have gone into farming without training or farm experience. It is comparatively easy for an unskilled laborer to buy a small farm, or it is just as easy for a small farmer to quit his farming and take on a job. Hence there seems to be an interchange between unskilled labor and small part-time farmers. In other words, they take the one that seems to pay the best.

Subsistence farmers are mostly city workers, people working at other industries and living in the country to reduce living expenses and have more congenial surroundings for their families. Many are persons who are retiring from other work because of age or other reasons; some are doing it for a hobby. They have very little effect on the farm economy as far as production of goods is concerned. They do, however, have a decided effect on the morale of the individual and serve as a balance wheel for old age and unemployment.

Most of the real-estate transactions in western Washington for the past several years have been in the part-time and subsistence brackets of farming. Pierce County has added few full-time farmers, but the number of part-time and subsistence farmers just outside city limits has increased greatly.

Small farms have both advantages and disadvantages compared to large farms.

Small farms are closer together and nearer markets. Labor is apt to be available for farmers who want additional work and for those with highly specialized crops who need help at harvest time. Their farming is highly specialized, their land is high in value, they have need for but little machinery, the original investment in equipment is low, little if any interest on money is paid, they have better roads, and they have social, educational, and recreational advantages over the larger farms.

There is a debit side, too. The small farm is more apt to have infestations of diseases, insects, and weeds because of concentration. The small farm operator, because of a lack of previous training, often needs more basic information on all phases of agriculture. Quite often the small-farm operator is more interested in his other job than in farming and therefore is apt to produce an inferior product for the market. Frequently youths find little opportunity on small farms.

Several possible methods of aiding the small farm operator have been suggested, and are worthy of consideration.

The development of purchaser, consumer, and service cooperatives is one suggestion. Through closer cooperation these operators may be able to enjoy many of the advantages and opportunities of large-scale business.

Because much of the small-type farming is poorly done, the adoption of improved practices would help alleviate the problem in many instances. The encouragement of industrial developments to create markets for farm products and furnish labor when needed for off-farm work is another avenue of approach.

The development of new agricultural enterprises, including new crops, farm forestry, and allied practices, would aid many of the small farmers. Training of rural leadership can be a means of opening broader horizons to these people in social, educational, and recreational life. Many small farms are on ill-chosen land. Many are farmed in the same method that "my father and his father before him" worked the land. The lure of the soil has attracted many to farms who might be better off in the city.

These are only a few of the problems and possible solutions which are open. The farms have helped build the cities; now the cities have aggravated this farming problem. Its solution presents a challenge.

Books

GROWTH AND DECLINE OF AGRICULTURAL VILLAGES. *David Ross Jenkins.* Teachers College, Columbia University. Contributions to Education, No. 89. New York. 95 pages.

by ALVA H. BENTON

THIS BOOK, termed by the author a dissertation, is a short publication in which he seeks to give an explanation of why the populations of some agricultural villages grow and others decline. He suggests that the conclusions reached will have some predictive value for countries that have not yet progressed as far as the United States along technological and educational lines. In this connection reference is made to consolidated schools, hard surfaced roads, county library schemes, and agricultural extension work.

The typical agricultural village is regarded as having about 1,200 inhabitants, a bank, 30 to 40 stores, and the social, religious, and educational agencies serving a community of 80 to 100 square miles. In the concluding paragraph of the introduction, there is a statement to the effect that the services which a village provide "in a measure determine the plane of living of rural people." Later in the dissertation, on page 82, there is a statement that "growth or decline of the village seems a prima facie measure of trends in the trade area." This latter point of view seems to the reviewer a much sounder one and is apparently supported by other statements of the author.

This book should interest readers who have followed the various studies made of 140 villages selected by the Institute of Social and Religious Research in 1924 as a representative sample of agricultural villages in the United States. The selection and first study was made by E. deS. Brunner and associates. These villages were studied by the President's Committee on Social Trends in 1936, and a subsample was studied later by the WPA. Mr. Jenkins' objective is to add something to these previous studies.

To make concrete the characteristics of villages that are growing and those that are declining in population, two villages were selected for intensive study. One of these was a declining village in a cotton growing community in the Mississippi bottoms, the other, a growing village in the bright-leaf tobacco area of North Carolina. The declining village was largely a trading center, by necessity, for the tenants of the company that owned a 15,000-acre holding on which cotton was raised by sharecroppers. The growing village was a trade center, by choice, of the farmers in the surrounding community and the seat of such industries employing labor.

BECAUSE THE AUTHOR was able to devote only 3 months of field work to the study, 12 villages of the 140 were selected, 6 growing and 6 declining. Five were investigated with considerable care, but 7, on cursory inspection, did not show clearly the earmarks of a growing or declining village and apparently were dropped from the study. Besides considering the 12 villages, Mr. Brunner sent a questionnaire to the school superintendents in the 140 villages originally selected to get reasons why their respective villages were growing or declining. Of interest is the tabulation of the replies. Government projects are first and new industries second as causes for an increase of population, and loss of industry first as a cause for the decline of population. The author remarks, however, that these superintendents were reluctant to report decline of population.

The first three chapters are devoted to the introduction, a survey of the two typical towns, and a statement of factors affecting growth or decline of agricultural villages. The following six chapters take up causes of growth and decline, birth rate and mobility, population pyramids, consequences of growth and decline, and consequences for the family and the school. Other studies are drawn upon for most of the material in these chapters. Some comparisons are made between data from these studies and those assembled by the author from the two towns which he selected as being illustrative of decline and growth. The careful reader will wonder how much weight (even as illustrative material) may be attached to the data from two arbitrarily selected villages.

The final chapter is the summary and conclusion. By implication, the relationship between growing and declining agricultural villages and schools is given particular stress. One problem raised is whether there should be a different curriculum in schools of villages of declining population and those of growing population.

There is an extensive bibliography besides numerous citations in the text of the book. References are made to studies carried out by the United States Department of Agriculture and several State agricultural experiment stations. Special mention is made of work done by Conrad Taeuber and Paul L. Vogt, of the Bureau of Agricultural Economics.

There is no business of life which so highly conduces to the prosperity of a nation, and to the happiness of its entire population, as that of cultivating the soil. Agriculture may be regarded, says the great Sully, as the breasts from which the State derives support and nourishment. Agriculture is truly our nursing mother, which gives food, and growth, and wealth, and moral health and character, to our country.

—JESSE BUEL

LAND TENURE POLICIES AT HOME AND ABROAD. *Henry W. Spiegel.* The University of North Carolina Press. Chapel Hill. 171 pages.

by BUIS T. INMAN

AT A TIME when the general public, farm leaders, and legislators have become extremely interested in formulating a desirable land tenure policy, a treatise analyzing pertinent concepts in light of experiences at home and abroad is sorely needed.

Legislative reforms pertaining to land tenure in general and tenancy specifically have been relatively inconsequential in this country; therefore, it becomes imperative that we draw primarily upon the experiences of other countries. Although in recent years many analyses of individual tenure problems have been presented, no one has attempted to cover the entire field. Dr. Spiegel has acquainted himself with this subject through his contacts while a student of land holdings in Europe and more recently in the United States.

In setting up the objectives of a land tenure policy in chapter I, Foundations of Land Tenure Policy, the author advances the question as to how these fit in with the general policy and objectives of the national agricultural policy. Thus, if help to the disadvantaged class is the goal through strengthening its position, would this be in harmony with the objective of adjustment for agriculture as a whole? He reaches the conclusion that "in many instances the answer cannot be in the affirmative."

THE AUTHOR feels that we can learn much from observations of European experiences in defining a desirable tenure policy, but we are warned, as Professor Wehrwein has expressed it, against accepting "uncritically the policies of Europe without accepting fundamental differences."

The fact is emphasized that land tenure reform is handicapped in this country because public opinion is inclined to attribute to property in fee simple the character of a natural law which does not stand alterations and adjustments to changing social conditions. Therefore, we have not yet realized that there are other alternatives and the very few who have realized this are able to see nationalization of the land as the only alternative policy.

THE IMPORTANCE placed by the author upon the content of the second chapter, The Legal Background of Land Tenure in the United States, becomes obvious when it is realized that "all land tenure policies aim at the maintenance of or changes in the legal relationship between man and the land" and that the objectives are attained largely through changes in the existing system of real property. The distinction made between ownership and tenancy is based upon the legalistic concept of the bundle of rights theory of property borrowed from English common law. After establishing what property is, brief discussions are presented of various provisions of law regulating it, such as corporate ownership, homestead exemptions, entails, household estates, rights and duties of tenant, alienation of land through deed restric-

tions, methods of land transfer, and inheritance.

In outlining the field of land tenure, it is easy to see the legal influence which has caused the author to eliminate farm labor entirely. It is difficult to determine, however, just how far he would go or where he would draw the line between labor and tenancy. Apparently he considers sharecroppers as laborers and thus not within the scope of land tenure reform since he expresses the hope that in the future the census will be corrected so that croppers will be enumerated as farm laborers.

Many readers will not agree with this simple solution. Croppers as enumerated by the census frequently assume the managerial functions on the farm and are adjudged as tenants by the written law and court decisions in some States. It seems, therefore, that the question may be raised as to the adequacy of a legal basis in defining the field of land tenure, and particularly since there is considerable variation in the State laws.

In chapter III information has been assembled from here and abroad pertaining to factors affecting land tenure. These factors include inheritance, taxation, collective action, credit, and interest. The opinions of leading students both in America and Europe are brought together concisely for the reader's evaluation.

Many will no doubt ponder long over the author's statement that "in European countries land inheritance is regarded as the heart of the tenure system," and that the inheritance customs which prevail in a region are considered as determining the social structure of that region to a large extent. This point of view is substantiated by statistical evidence from the experiences of England and France. It would seem that this viewpoint is tenable only when there are combined with the rights of inheritance such others as the right to subdivide or to alienate. Inheritance provisions probably should be given further analysis to determine their influence upon our tenure pattern before accepting the author's conclusions regarding the importance of inheritance laws in the United States, since there is still more freedom of movement in occupations and less value placed upon the ownership of land here.

One might well ask what part of the difference between tenure conditions in England and France is due to inheritance laws and what is due to other social institutions. It is quite obvious that in the southern part of the United States the plantations established by the early English settlers have remained almost intact except for economic reverses, while in other areas large holdings dating from early times have become considerably subdivided, although the inheritance laws were substantially the same in both instances.

The tenure of forest land is recognized by the author as a problem apart from other forms of landed property since special requirements in forest production have made the State a very able entrepreneur. After analyzing this problem pro and con from the experiences both in this country and in Europe, the conclusion is reached that "there is still a place for private forests in areas where it is possible to make a profit out of them."

CREDIT is adjudged of importance by the author in formulating a

land policy since an abundance of farm credit will make tenancy decrease. This substitution of a landlord for a landlord brings about other complexities in the tenure system. Many readers will probably require more proof than that supplied in the tables to be convinced that commercial banks, mortgage companies, and life insurance companies "discriminate" against owner-operated farms in the United States.

In chapter IV, Farm Tenancy Policy, the premise is stated that we place too much emphasis in this country upon the belief that tenancy is a social disease, and have tended to rest the case too much upon the plight of the sharecropper who is not really a tenant. In European countries, economists generally do not condemn tenancy as such, but have attacked the legal basis of the institution of tenancy.

The author agrees with Pigou that we should attempt to make the private net product of the tenant equal to the social net product; long-term leases, compensation for improvements, compensation for disturbance, and fair rents are given close scrutiny for achieving this goal.

The last two chapters are devoted to a rather thorough analysis of the land tenure policies of England and Germany because they exemplify land tenure policies under a democratic and a totalitarian form of government. This adds considerably to previous frequent discussions which generally have presented the provisions without much consideration as to their effects. With first-hand knowledge of European conditions, Dr. Spiegel has analyzed the tenure programs "as part and parcel of the current agricultural policy of these countries." He finds maximization of the national dividend no longer to be the goal—but, rather, a larger domestic output of food. The prediction is made that the policies of these countries will continue to be one that considers the conditions of agriculture as proper functions of the State.

The English tenure policy formulated in the Agricultural Holdings Acts is presented by the author as a perfect example of the dynamics inherent in governmental action where each step necessitates the next. The English doctrine of tenure, which denies the proprietor an absolute right, helps to explain the present tendency toward national ownership.

Because of present restriction in Germany upon the farmer to do with his land as he wishes, the question is debated as to whether land is the property of the owner, and therefore the term "the New Feudalism" is applied. Legitimate use has become

the basis of property, and property is a reward for obedience. The complexity of legal provisions has become almost incomprehensible, and agricultural policy is full of tendencies often incompatible with each other. Little good is found by Dr. Spiegel in the Nazi tenure policy.

Dr. Spiegel has devoted a relatively large part of the book to the analysis of farm tenancy policy. After reading the book, many will feel the need for more thorough treatment of farm ownership with particular reference to such topics as absenteeism, inheritance, concentration of holdings, and mortgage indebtedness. Some of the aspects of land tenure policies of European countries will need further scrutiny before they can be recommended for adoption in this country without consideration of related social institutions and the results that would be expected by invoking them. We would still like to think of a land tenure policy involving less legal force and a more cooperative spirit than seems to have been outlined by Dr. Spiegel. Nevertheless, the author has achieved his objectives of conveying information and stimulating discussion. Students of land tenure reform will welcome this analytical treatment of so timely a subject.

For Your Attention

A PLAN FOR BRITAIN. Planning Pamphlets No. 3. National Economic and Social Planning Association, 1721 Eye Street NW, Washington, D. C. February 1941. 56 pages. 25 cents.

This is one of those excellent reports (formerly called PLAN AGE and published 10 times a year or oftener) on problems of public affairs and "the design of methods and the formulation of policies for the more effective organization of our society."

In the present number are 10 articles about employment, social security, homes, education, health, and several more general plans in Great Britain after the war. They are reprinted from the London weekly, PICTURE POST, and are presented by NESPA "because they serve as an example of the thought and inquiry which should be undertaken by people throughout the United States."

PICTURE POST's foreword says: "We believe that, after this war, certain things will be common ground among all political parties. It will be common ground, for example, that every Briton—man, woman, or child—shall be assured of enough food of the right kinds to maintain him in full bodily health and fitness. It will be common ground that we must reform our system of education—so that every child is assured of the fullest education he can profit by. It will be common ground that our State medical service must be reorganized and developed so as to foster health, not merely battle with disease. It will be common ground that the agricultural land of Britain must not again be given up to thistles and bracken; and that the beauty of our country and our buildings is the nation's heritage, not to be pawned away in plots to speculative builders."

Of special interest to American farm workers is the article, *The Land for All*, by L. F. Easterbrook, an agricultural expert and journalist. He lists, as objectives,

proper care and revival of the soil; a commission to apportion the land for the various needs of the community; the land equipped with modern farm buildings and facilities; scientific and commercial services behind the farmer; every farmer to hold a certificate, establishing that he is fit to control his part of the common inheritance, a rural civilization, a career for farm workers by awarding land to men of approved experience.

"To re-create a rural civilization must be our aim, not the narrower one of merely making farming profitable," he writes. "Therefore we must attract people of all kinds back to country life. To think of this in terms of forcing every new country dweller to work on the land is a contradiction of civilization. There must be a countryside of rural industries, and there is already every indication that more factories will move out into country districts."

Competition Between Fruits at Retail, New York City, November 1939. Preliminary Report. Marius P. Rasmussen, Ford A. Quitslund, and Edwin W. Cake. U. S. Farm Credit Administration. Misc. Rpt. 30, Washington, D. C., December 1940. 91 pages.

"This is the second of a series of preliminary reports containing factual information on retailer and consumer demand for apples and other fruits during three different periods of the 1939–40 season. These reports also contain information on seasonal competition between apples and other fruits at retail in New York City. The first report was issued in September 1940 and covered weekly sales of apples and other fruits through 1,543 retail outlets of various kinds during August 1939. Readers are referred to that report for a statement of the background of this study . . ."

The data on which this report is based were obtained in New York City during November 1939. Samples of retail outlets included 422 independent fruit and vegetable stores, 361 independent grocery stores, 319 pushcart and public market stall operators, 277 chain grocery stores, 71 wagons or motor hucksters, and 66 meat markets. A cross section of retail fruit outlets in areas representing each of the various family-income levels in the four large boroughs was obtained.

Data obtained include dollar volume of sales by types of outlets, quantities of fresh fruits handled weekly, sales volume of different outlets for fresh fruits, proportion of retail outlets handling each fruit, relation of family income to coverage and sales, quantities of canned fruits and juices handled weekly, and influence of family incomes on sales of fresh and canned fruits and juices.

Tables showing gross retail margins, gross margins and volume of sales for individual fruits, and income areas and gross retail margins of individual fruits are included.

Discussion is included of spoilage of fruits in relation to sales and volume handled; display space as related to sales; and varieties, grades, sizes, and brands of apples handled.

Rural Sociology Pamphlets Nos. 7–10. South Dakota Agricultural Experiment Station, South Dakota State College, Department of Rural Sociology. 1940–41.

No. 7. The Declining Enrollment Problem in the Elementary Schools of Moody County, by W. F. Kumlien, Clifford Holm, and C. Scandrette. 8 pages.

No. 8. The Declining Enrollment Problem in the Elementary Schools of Day County, by W. F. Kumlien, Clifford Holm, and C. Scandrette. 10 pages.

No. 9. The Problem of Declining Enrollment in the Elementary Schools of Lake County, by W. F. Kumlien and C. Scandrette. 8 pages.

No. 10. The Problem of Declining Enrollment in the Elementary Schools of Hyde County, by W. F. Kumlien, C. Scandrette, and Raymond Hatch. 7 pages.

In each of these counties, a falling birth rate has been the principal factor in the decline of enrollments in elementary schools. In only one county—Day County—has loss from migration been a contributing factor. A basic cause, however, may be found in the fact that the small one-school district system prevails in these counties. At the time these school districts were established, it was not apparent that the counties would not be able to maintain a large enough population to make this system feasible.

Many of these small one-room schools have been closed and consolidated schools established. In some cases, pupils have been sent to neighboring districts as tuition pupils.

These pamphlets tell the story by means of charts, diagrams, and text. Each contains suggestions for solving the problem. Temporary measures would involve keeping the school district intact but closing the school when the enrollment drops below five pupils and sending pupils to other schools as tuition pupils. As a long-time solution, the entire reorganization of the rural school system of the county, or the consolidation of several school districts suggested.

Analyses of United States Soils. Section I: North Atlantic States. J. G. Lipman, J. S. Joffe, and Adrienne B. Conybeare. 40 pp.+35 pp. addenda. New Bunswick, New Jersey Agricultural Experiment Station.

This is the first publication to be issued of a larger study dealing with the plant food resources of the United States. Of these soil analyses, the remaining 4 sections will cover respectively the South Atlantic, the North Central, the South Central, and the Far Western States. Publication dates of these and other portions of the material collected concerning the plant food resources of the country are uncertain, depending upon availability of funds and a variety of other factors.

In the section, Remarks on Analytical Data, the following statement appears:

"The compilation and assembly of the analytical data by states, under one cover as presented in this publication, are a step in the right direction. At a glance anyone may see what has been done on the soils of the respective states. The publication is a sort of a handbook on soil analyses of and for individual states and sections of the country. The information in the handbook may be used in different ways, as has been pointed out. It is the basis for the inventory of the plant food resources of the individual states and of the country."

Men and Resources; A Study of Economic Opportunity in the Pacific Northwest. Condensation of a Report and Supporting Memoranda, "Migration and the Development of Economic Opportunity," prepared by the Pacific Northwest Regional Planning Commission. Portland, Oreg. Northwest Regional Council. 81 pages.

In 1934, when drought struck the Great Plains, people from that section of the country and from other depressed areas poured into the Pacific Northwest, seeking a new opportunity. Certain changes in the economy of the region had been gradually taking place, even before the depression of 1930. The initial period of rapid growth in agriculture and lumbering was approaching an end. Market expansion outside the region was slowing down. In 1930 the depression, both in this country and abroad, resulted in still further destruction of markets.

In 1933, in an effort to stimulate economic activity, the construction of two huge projects to utilize the water power of the Columbia River, Grand Coulee, and Bonneville, were undertaken by the Federal Government.

All of these changes call for the development of new industries and the expansion of agriculture to provide employment and to utilize the available electric power. This report sets forth the problem facing the region, describes the people of the section; discusses basic material resources—land, forests, water, fish, and minerals—and points out their relation to economic opportunity.

The various economic opportunities of the region are listed under agriculture, manufacturing, service industries, and recreational industries. While realization of these opportunities depends in large part on factors and developments beyond the power of the region to control, much can be done through regional policies and programs.

Forestry on Private Timberlands: A Pictorial Record of what Some Private Timberland Owners in the United States are doing to Keep

THEIR FOREST LANDS PRODUCTIVE. Prepared in the Division of Private Forestry, Forest Service, U. S. Dept. Agr. Misc. Pub. 381. 25 pp. Washington, D. C., September 1940.

The pictures in this publication are representative of that 20 percent of the privately owned forest area which is reported by the Forest Service as being under some form of management. They indicate what the owners of the other 80 percent can do under similar circumstances. Methods illustrated vary but are all designed to build up or maintain productive capacity of the forests while merchantable products are periodically removed. This is an attractively arranged publication and should be useful in pointing out to private owners helpful practices.

FAMILY INCOME AND EXPENDITURES, Southeast Region. Part 1, Family Income. Dorothy Brady, Day Monroe, Gertrude Schmidt Weiss, Thelma Dreis. U. S. Dept. Agr. Misc. Pub. 375, 389 pp. Washington, 1940. (Consumer Purchases Study, Urban and Village Series.)

This report, one of a series which was reviewed in the December 1940 issue of the LAND POLICY REVIEW, was prepared by the Bureau of Home Economics and the Bureau of Labor Statistics, with the cooperation of the Work Projects Administration and the Central Statistical Board. White and Negro families in villages and small cities in the Carolinas, Georgia, and Mississippi, were investigated as to composition of family, income levels, family income and earners, sources of income, responsibility for family support, living quarters, home tenure, and rentals.

AN ECONOMIC STUDY OF FOODS AND GRAZING IN MILK PRODUCTION. A Study of Conditions in the Eastern Counties of England. Cambridge Univ., Dept. Agr. Farm. Econ. Branch. Rpt. 28, 40 pp. November 1940.

"This report is based upon information and experience obtained in the eastern counties in the operation of the Cambridge Food Recording Scheme for Dairy Cows. Discussion of the data, which were collected during the 3-year period 1934–35 to 1936–37 is largely in quantitative terms." A marked tendency during membership of the scheme toward improved efficiency of feeding is noted. A positive correlation of food input per cow and milk yield per cow, and a negative correlation of milk yield per cow and food input per gallon (except at the highest yields) are shown. Appendixes contain specimen records, specimen reports to members, and a summary of previous publications forming a series with this report.

CONSERVING LAND AND WATER RESOURCES. Brief Description of the Purpose and Organization of the Southeastern Florida Joint Resources Investigation. Stanley H. Wright. Tallahassee, Florida State Planning Board. January 1941. 12 pages.

The objective of this investigation is to set forth, in a combined report, a long-range plan of land and water resources development for southeastern Florida. This major problem concerns that part of the southern peninsula extending from Lake Okeechobee to the Keys and including the Everglades, containing about 4,000,000 acres of land and water. This area has an immense potential value for agriculture, a value which is only partly developed. It is of great importance also, as a national park, in furnishing game refuges, and for public water supplies.

PENNSYLVANIA PLANNING. v. 7, no. 1, August 1940. Issued by Pennsylvania Department of Commerce, State Planning Board.

The August issue of this small periodical, which is designed "to inform those who are interested and to interest others," includes an article, Machine Tool Industry in Pennsylvania, pp. 3–14; Recent Planning and Zoning Activity, p. 17; book and magazine reviews; and a selected bibliography.

Information is included as to composition of families—size, age of members, etc.—income levels, sources of income, responsibility for family support, family occupation, earnings, living quarters, home tenure, and rentals. The information relates to both relief and nonrelief families.

A country can only continue long prosperous, and be truly independent, which is sustained by agricultural intelligence, agricultural industry, and agricultural wealth. Though its commerce may be swept from the ocean—and its manufactures perish, yet, if its soil is tilled, and well tilled, by an independent yeomanry, it can still be made to yield all the absolute necessaries of life—it can sustain its population and its independence—and when its misfortunes abate, it can, like the trunkless roots of a recently cut-down tree, firmly braced in, and deriving nourishment from, the soil, send forth a new trunk, new branches, new foliage, and new fruits—it can rear again the edifice of its manufactures, and spread again the sails of its commerce.

—Jesse Buel

U. S. GOVERNMENT PRINTING OFFICE: 1941